

**ABSTRACT**

Terminal authentication and call processing in a private wireless high-speed data system is effected by a private pDLR adapted to effect authentication of a terminal entering the private network and call processing and arranged within a private EV-DO wireless network. Session information of the corresponding terminal is received from a data location register (DLR) of the public EV-DO network only when the terminal entering the private EV-DO wireless network requests the call connection for the first time and is stored in a database of the private pDLR, and the call processing and authentication are performed. The authentication of the corresponding terminal is performed by extracting an International Mobile Station Identity (IMSI) of the terminal included in the session information of the corresponding terminal and determining whether the extracted IMSI is registered in a pDLR database of the private EV-DO wireless network, without needing a separate AN\_AAA in the private EV-DO wireless network. The call processing is then performed using the session information for the corresponding terminal stored in the private pDLR without a separate authentication procedure when a call connection is requested from the terminal entering the private network at least two or more times.